



Filing Receipt

Received - 2021-07-30 02:26:53 PM
Control Number - 51840
ItemNumber - 51

PROJECT NO. 51840

RULEMAKING ESTABLISHING	§	PUBLIC UTILITY COMMISSION
ELECTRIC WEATHERIZATION	§	
STANDARDS	§	OF TEXAS

**SHARYLAND UTILITIES, L.L.C.’S RESPONSE TO
COMMISSION STAFF’S DISCUSSION DRAFT AND
QUESTIONS FOR COMMENT**

Sharyland Utilities, L.L.C. (“Sharyland”) hereby submits this response to the Public Utility Commission of Texas (“Commission”) Staff’s discussion draft and questions for comment issued in this project on July 19, 2021. Commission Staff requested comments by July 30, 2021. Therefore, these comments are timely filed.

I. Introduction and Executive Summary

Sharyland appreciates the opportunity to submit these comments and looks forward to working with the Commission and other stakeholders to address weatherization issues. Sharyland is providing these comments from the perspective of a transmission service provider (“TSP”) in the Electric Reliability Council of Texas, Inc. (“ERCOT”) power region. Accordingly, Sharyland’s comments are limited to the issues in the discussion draft that relate to the provision of transmission service. Sharyland shares the Commission’s appreciation for the importance of a resilient electric system and the need to maintain reliable service during severe weather conditions. Sharyland looks forward to working with the Commission and Commission Staff on a rule that implements the directives of the Legislature contained in Senate Bill 3.

As Sharyland and several other commenters noted in response to Commission Staff’s prior request for comments, TSPs design their transmission systems to meet or exceed a number of standards. These standards include those established by the National Electrical Safety Code (“NESC”), Institute of Electrical and Electronic Engineers (“IEEE”), and the American National Standards Institute (“ANSI”), among others. These standards provide detailed, specific requirements (a) around which transmission facilities must be designed and constructed and (b) within which electrical equipment must be engineered and fabricated in order to operate reliably throughout a variety of severe weather conditions. The result is an industry-wide standard for both utilities and manufacturers of transmission equipment.

The discussion draft rule would require TSPs to implement measures to operate under the 98th percentile of each of the extreme weather scenarios. Because the weather study has not yet been conducted, it is not possible for Sharyland to analyze what changes, if any, would be necessary to Sharyland's transmission design criteria and in-service transmission facilities. Additionally, the discussion draft rule does not have any detailed engineering requirements similar to those established by the current recognized standards organizations (e.g., NESC, IEEE, and ANSI). As explained in further detail below, Sharyland believes that developing specific design criteria based on current standards could avoid a number of unintended consequences including, but not limited to, inconsistencies with current codes and standards, variability in design standards among TSPs, and potentially increased costs to ERCOT ratepayers. Therefore, consistent with the prior comments made by Sharyland and other TSPs in this project, Sharyland suggests that the Commission implement a rule based on the standards that currently exist, at least until such time that further analysis and research can be conducted. Sharyland suggests that the rule should be modified to allow for stakeholder input after ERCOT has provided the weather study.

As requested by Commission Staff, Sharyland provides the following bulleted list summarizing Sharyland's comments.

- The Commission should adopt a rule based on current national equipment standards, at least until such time additional analysis is conducted after the preparation of the ERCOT weather study.
- Additional analysis is required to determine if any additional standards are required to ensure transmission system reliability during extreme weather events based on the weather study.
- Specific design criteria should be developed if it is determined that additional standards are necessary beyond the current national standards. A general design standard may result in unintended consequences.
- Sharyland suggests the following modifications to specific sections of the rule:
 - Subsection (j) should be revised consistent with Sharyland's comments to allow for stakeholder input before establishing compliance deadlines;
 - Subsection (m)(1) should be modified to allow for a TSP to demonstrate that an equipment failure was unrelated to a weather event;
 - Subsection (m)(3) should be deleted in its entirety; and
 - A new subsection should be added to allow for the creation of a regulatory asset for engineering studies that may be conducted to comply with the new rule.

II. Response to Questions

Sharyland appreciates the opportunity to provide this response to Question No. 1 in Commission Staff's request:

1. What is the availability of statistically reliable weather information from, e.g. the American Society of Heating, Refrigeration and Air Conditioning Engineers; National Weather Service; or other sources for the ERCOT power region? Please share the source of that information.

Sharyland believes that the data maintained by the American Society of Heating, Refrigeration and Air Conditioning Engineers, the National Weather Service, and the National Oceanographic and Atmospheric Administration is statistically reliable weather information. As discussed in more detail below, however, Sharyland believes that utilizing this data to establish new design requirements for transmission facilities could have a number of unintended consequences without further research and analysis.

Sharyland interprets Question No. 2 as applicable to generators given that it asks about “market-based” mechanisms. Therefore, Sharyland's comments do not address this question.

III. Comments

A. General Comments

Sharyland designs, constructs, operates, and maintains its infrastructure consistent with all applicable existing codes, standards, and guidelines to provide safe and reliable transmission service. Sharyland designs its transmission facilities to meet or exceed NESC, IEEE, ANSI, and other standards established for particular geographic areas that were in effect at the time the facilities were first placed into service or upgraded. The NESC, for example, specifies environmental loading conditions—e.g., wind and ice loads—that transmission structures must withstand. Rules 250B, 250C, and 250D of the NESC divide the continental United States into three geographic Loading Zones (Light, Medium, and Heavy) and impose certain minimum loading requirements for wind and ice depending on the facilities' locations.¹ These standards are detailed and specific, which has resulted in general consistency across the industry for both utilities and manufacturers of transmission equipment.

Sharyland appreciates that the Legislature has directed the Commission to establish a rule to require TSPs to implement measures to prepare facilities to maintain service quality and

¹ If a facility is located in multiple Loading Zones, the more stringent design criteria of the most severe Loading Zone is applied to the entire facility.

reliability during a weather emergency. Furthermore, Sharyland understands that there has been a limited amount of time to develop a rule to address Senate Bill 3 and that developing specific engineering requirements to address various weather scenarios takes a significant amount of time. Indeed, synthesizing climatological data into electrical and mechanical design criteria requires a methodical and lengthy process based on analytical and empirical testing activities. The NESC, for example, has existed for over 100 years and is continually refined and updated based, in part, on new weather data.

Given the time and complexity involved in developing not only the applicable weather assumptions, but also the specific design standards for equipment under the applicable weather conditions, Sharyland can appreciate why the discussion draft rule has a general standard for TSPs to ensure their systems can provide service under the 98th percentile of each of the extreme weather scenarios. However, Sharyland believes that adopting a general standard may result in a number of unintended consequences. The creation of a modified standard may result in future designs that are inconsistent with the existing national standards. In addition, a general standard may result in design variability among TSPs in ERCOT. Without specific mechanical and electrical design requirements, TSPs will have to develop their own design criteria based on their own judgment and that of their engineering contractors to ensure compliance with the Commission's rule. This may result in every utility developing different design criteria with varying levels of cost.

The impact to the grid and costs to consumers should be fully considered as new standards are created. Manufacturers design circuit breakers, transformers, and other transmission system components to operate within a range of environmental conditions promulgated by the NESC and IEEE. The creation of a new weather standard that is decoupled from the existing engineering and design standards may result in manufacturers and/or utilities reducing the ratings of some equipment and systems in order to comply with the new standard, which could reduce the capacity of the grid. Moreover, in some cases wholesale replacement of fully functional equipment may be necessary to achieve compliance with a new standard. Sharyland agrees with the comments provided by ERCOT in this project that additional analysis is required to see how the current standards align with the conditions experienced in February 2021 and that further analysis is needed to identify common mode failures that could be prevented by establishing Commission standards that exceed the current national standards. Additional analysis will help ensure that any additional costs provide corresponding reliability benefits.

Sharyland believes that the additional analysis should be conducted by allowing for stakeholder input after ERCOT files the weather study in accordance with subsection (c)(2) of the discussion draft. It is possible that the weather study will not require any changes to certain transmission facilities. It is also possible, however, that significant changes will be required.

By allowing for stakeholder input after the weather study, the Commission could analyze the 98th percentile weather criteria against the current NESC, ANSI, and IEEE standards to determine if any modified equipment standards are necessary to ensure transmission equipment can withstand the 98th percentile weather conditions. If the weather study indicates that an existing equipment standard should be enhanced to meet the 98th percentile, the Commission could determine, with input from stakeholders, any necessary enhancements. Depending on the results of the weather study, Sharyland provides the following examples that could potentially be implemented to provide specific equipment standards to TSPs:

- Transmission Lines: Various weather conditions (e.g. wind and ice) are considered under NESC standards to determine transmission design criteria. If the weather study indicates that enhancements to existing requirements are necessary, one potential avenue to address this could be applying a mandatory safety factor to the NESC loading criteria.
- Transformers: IEEE standards provide that transformers shall be suitable for operation at their rated kilovolt-ampere (“kVa”) under certain environmental assumptions. For example, IEEE Standard C57.12.00 provides that transformers shall be suitable for operation at their rated kVa so long as the temperature does not exceed 40 degrees Celsius and the average temperature for any 24-hour period does not exceed 30 degrees Celsius. If the weather study indicates that a safety factor of 110% should be implemented, transformers would have to be designed to operate at their rated kVa so long as the temperature does not exceed 44 degrees Celsius and the average temperature for any 24-hour period does not exceed 33 degrees Celsius.

Finally, determining a reasonable compliance timeline, like the determination of any enhanced equipment standards, calls for an opportunity for additional stakeholder input following development of the weather study. Until the weather study is prepared and potential changes to equipment standards are better understood, TSPs cannot evaluate the time necessary to achieve

compliance. If the rule ultimately adopted allows for stakeholder input after the weather study is complete, stakeholders will be in a better position to comment on the time needed to achieve compliance, and the Commission could establish deadlines based on the stakeholder input.

B. Comments on Specific Sections

Subsection (j). As discussed in Sharyland's general comments above, Sharyland believes that additional analysis should be conducted after the preparation of the weather study and that the Commission should establish compliance deadlines after receiving stakeholder input on the amount of time and costs involved in complying with any new standards. Notwithstanding the foregoing and to the extent a compliance deadline is included before receiving additional stakeholder input, Sharyland suggests that subsection (j) be clarified to state that a utility can include in its non-compliance report all transmission facilities (i.e., those inside or outside a substation or switching station) that do not meet the standard. The first sentence of subsection (j) can be interpreted to mean that all transmission facilities inside a station facility must be compliant by November 30, 2023 and cannot be included in the non-compliance report. Depending on the results of the weather study, it may not be possible to implement changes to transmission facilities to comply with the rule by November 30, 2023. Furthermore, it would provide the Commission with the opportunity to evaluate the costs, and any associated benefits, associated with upgrades to non-compliant facilities, including facilities outside a substation or switching station.

Subsection (m)(1). Sharyland suggests that subsection (m)(1) of the draft rule be modified to reflect the fact that equipment failures may occur for reasons other than weather events. To the extent that an equipment failure occurs during an extreme weather event that is unrelated to the weather, a TSP should be allowed to submit engineering documentation to demonstrate that the facilities were in compliance with the standard, but failed to operate for reasons unrelated to weather.

Subsection (m)(3). Sharyland believes that this subsection (m)(3) should be removed from the rule. Senate Bill 3 includes a requirement to have a professional engineer submit an assessment to the commission and ERCOT with respect to generation facilities, but the legislation does not include this requirement for transmission facilities. If the Legislature intended for this requirement to apply to transmission facilities, it could have included that requirement just as it did for generation facilities.

Lastly, Sharyland believes that it would be appropriate for the rule to allow a TSP to establish a regulatory asset to recover costs associated with any engineering studies that are required to determine what transmission facilities meet the new standard and what transmission facilities need to be upgraded, modified, or replaced. TSPs may incur significant costs to analyze every element of their transmission facilities to make these determinations. Therefore, TSPs should be authorized to establish a regulatory asset to record these potentially significant costs.

IV. Conclusion

Sharyland shares the desire of the Legislature and the Commission to ensure transmission system reliability during severe weather events and Sharyland looks forward to working with the Commission, Commission Staff, and all interested stakeholders to develop a rule to achieve this common goal. Sharyland believes that the best approach is to allow for stakeholder input on the weather study to allow for sufficient consideration of the timelines and costs associated with any changes that TSPs may need to make to comply with the new standard. At the same time, this will provide an opportunity for the Commission to determine any additional, specific standards that may be necessary beyond those currently applicable to TSPs.

Respectfully Submitted,

/s/ Jeffrey B. Stuart
Jeffrey B. Stuart
State Bar No. 24066160
John M. Zerwas, Jr.
State Bar No. 24066329
Eversheds Sutherland (US) LLP
600 Congress Avenue, Suite 2000
Austin, Texas 78701
(512) 721-2700 (office)
(512) 721-2656 (fax)
jeffreystuart@eversheds-sutherland.us
johnzerwas@eversheds-sutherland.us

Attorneys for Sharyland Utilities, L.L.C.